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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/899,767 | 07/05/2001 | Thomas E. Mallouk | 105557 | 2345 |

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EXAMINER

TRAN, MY CHAU T

ART UNIT PAPER NUMBER

1639

DATE MAILED: 03/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|--------------------------------------|---------------------------------------|--|
| Office Action Summary | Application No. 09/899,767 | Applicant(s) MALLOUK ET AL. | |
| | Examiner MY-CHAU T TRAN | Art Unit 1639 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 July 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>9/4/01 & 4/9/02</u> . | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

Note: The examiner for your application in the PTO has changed. However, the Group and/or Art Unit location of your application in the PTO is remained the same, which is Group Art Unit 1639.

Status of Claims

1. Applicant's amendment filed 8/20/03 is acknowledged and entered. Claims 17-32 have been canceled.
2. Claims 1-16 are pending.

Election/Restrictions

1. Claims 17-32 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected inventions, there being no allowable generic or linking claim. Election was made **without** traverse in Paper Dated 8/20/03.

3. Applicant's amendment filed 12/9/03 has elected the following species for the elected invention (Claims 1-16):

- a. A species of catalyst array support: carbon paper.
- b. A species of detector: the human eye.
- c. A species of solids: catalysts.

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- d. A species of reagent fluid: reformat gas. However since applicant has cancel claims 17 and 20, this species election is considered moot.
- e. A species of ion concentration indicator: Ni-3-pyridin-2-y1-<4,5,6>-triaz0-<1,5-a>-pyridine. However since applicant has cancel claims 17-19, this species election is considered moot.
- f. A species of second reagent fluid: hydrogen. However since applicant has cancel claim 23, this species election is considered moot.

Priority

- 2. Applicant has complied with one or more conditions for receiving the benefit of an earlier filing date of 07/08/2000 under 35 U.S.C. 119(e). The priority is acknowledged and entered.

Information Disclosure Statement

- 3. The information disclosure statements (IDS) submitted by applicant filed on 09/04/2001 and 04/09/2002 are acknowledged and considered.

Drawings

- 4. The drawings were received on 07/05/2001. These drawings are acceptable.

Claim Rejections - 35 USC § 112

- 5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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6. Claims 1-16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

a. The term “catalyst mask” of claim 1 is a relative term, which renders the claim indefinite. The term “catalyst mask” is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably appraised of the scope of the invention. It is unclear if the catalyst mask as claimed is an inherent feature of the support such as pores or a separate feature of the apparatus such as a covering or a film. Furthermore, it is unclear what is being masked by the “catalyst mask” wherein it is claimed as having *“defining holes arranged in alignment with the multiple locations of the catalyst array support”*.

b. The term “reagent mask” of claim 8 is vague and indefinite because the claimed location of the reagent mask appears to be synonymous with the location of the “seal” claimed in claim 7 and the “diffuser” of claim 9. Thus, it is unclear if the feature of the “reagent mask” is the same as the “seal” and/or the “diffuser”.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who

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has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

8. Claims 1, 10, 12, and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by Sarangapani (US Patent 5,683,829).

Sarangapani discloses a fuel cell electrode (apparatus) (Abstract; col. 3, lines 52-61). The electrode comprises sintering carbon black with carbon black particles covered with the catalyst that form a porous network (catalyst mask) on carbon paper (catalyst array support) (col. 4, lines 53-64). The fuel cell (cell body/backing) comprises a housing with an inlet and an outlet (fig. 4; col. 4, lines 65-67). The electrode further comprises a holder (cell cover) (fig. 5; col. 4, lines 65-67). Thus the fuel cell electrode of Sarangapani anticipates the presently claimed apparatus.

9. Claims 1, 6-7, 13, and 16 are rejected under 35 U.S.C. 102(e) as being anticipated by Warren et al. (US Patent 6,187,164 B1).

Warren et al. disclose an electrochemical cell for testing the deposited materials on an array for specific properties of interest (col. 2, lines 46-50; col. 6, lines 58-60). The deposited materials comprise a library of sixty-four different Pt-Ru compositions (catalyst) (col. 8, 2-8).

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The anode assembly (apparatus) comprises individually addressable electrical contact wherein the Pt-Ru compositions are deposited (catalyst array support) (ref. #10), contact pads (catalyst mask) (ref. #122), a glass housing (cell body) (ref. # 82), inner flange (cell cover) (ref. #106), o-rings (seals) (ref. #100 and 110), pads (seal between array and cell cover) (ref. # 114), and a fluid filling hole (ref. #94) (col. 6, line 58 to col. 7, line 32; fig. 4A and 4C). Therefore, the electrochemical cell of Warren et al. anticipates the presently claimed apparatus.

10. Claims 1-4, 6-10, 12-14, and 16 are rejected under 35 U.S.C. 102(e) as being anticipated by Senner (US Patent 6,528,191 B1).

Senner discloses a sensor assembly (apparatus) comprises a membrane electrode assemblies (MEAs) electrically isolated from one another and sequentially arranged in the path of a gas stream (col. 3, lines 24-27; figures 5-8). The sensor assembly comprises a container (ref. # 155) (cell body) with an inlet and outlet (ref #153, #190, & #192) that houses a membrane (ref. #180) (cell cover) (col. 12, lines 25-30; fig. 5). The membrane comprises distinct catalytic reactive surfaces or areas (ref. #150 and 152) (catalyst array support), a graphitic/carbon diffusion layer (ref #186) (catalytic mask/reagent mask), gaskets (ref. #184) (seals), and gas diffusion elements (ref. #188) (diffuser) (col. 12, lines 30-53; fig. 6-8). The sensor assembly further comprises a controller (detector) (col. 12, lines 53-56). Thus the sensor assembly of Senner anticipates the presently claimed invention.

Double Patenting

11. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or

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improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

12. Claims 1 is rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-3, 8, and 10 of U.S. Patent No. 6,692,856 B2 (Smotkin). Although the conflicting claims are not identical, they are not patentably distinct from each other because it would be obvious to include a fluid inlet in the device of Smotkin for the advantage of providing an open wherein the sample can be injected into the device without excessive handling of the sample and/or device.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MY-CHAU T TRAN whose telephone number is 571-272-0810. The examiner can normally be reached on Mon.: 8:00-2:30; Tues.-Thurs.: 7:30-5:00; Fri.: 8:00-3:30.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, ANDREW WANG can be reached on 571-272-0811. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

mct

March 8, 2004



PADMASHRI PONNALURI
PRIMARY EXAMINER